

Gov. Doc  
Can  
Ag  
S

Canada, Agrie. Dep.

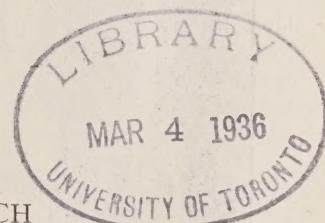
# HOG CHOLERA



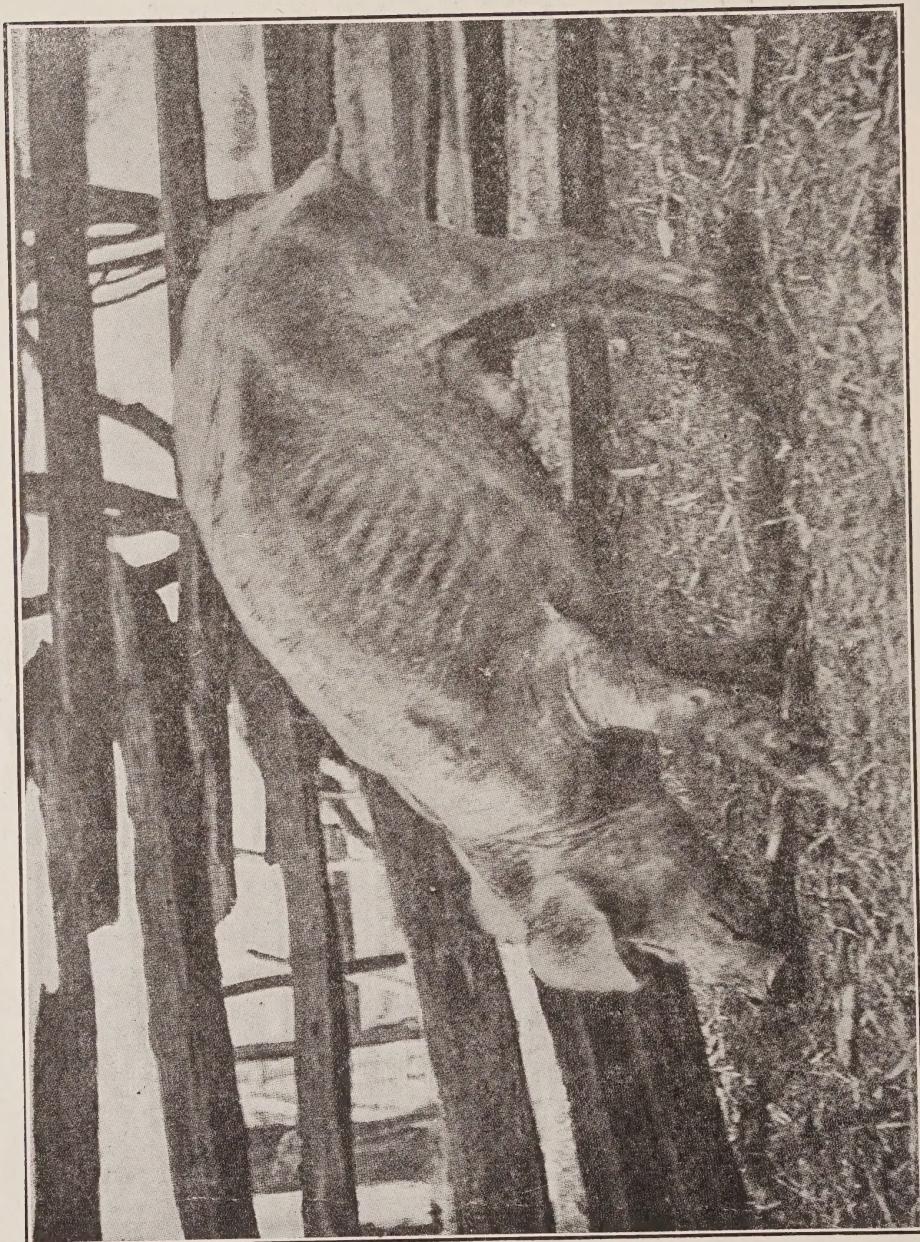
By A. E. CAMERON, V.S., CHIEF VETERINARY  
INSPECTOR

DOMINION OF CANADA  
DEPARTMENT OF AGRICULTURE  
PAMPHLET No. 54.—NEW SERIES

HEALTH OF ANIMALS BRANCH  
GEO. HILTON, V.S., Veterinary Director General



Published by direction of the Hon. W. R. Motherwell, Minister of Agriculture,  
Ottawa, May, 1925



HOG CHOLERA—CHRONIC FORM

# HOG CHOLERA

---

Hog cholera is a contagious disease of swine. It does not appear to affect other species of animals, and is characterized by extreme contagiousness and a high death rate. It is known in every part of the world and is prevalent in the United States to an alarming extent, causing enormous losses. In Canada, the disease appears from time to time in various parts of the country where the infection has been brought in some way or other, and it is to put the owners of swine on their guard and to tell them what to do in case the disease makes its appearance that this bulletin is issued.

## The Cause of the Disease

*The cause of the disease* is a germ, and without the presence of the germ there can be no hog cholera. In other words, such things as neglect, bad feeding, filthy surroundings, have no power to produce hog cholera. But when the infection is introduced among hogs under such conditions, the disease spreads with great rapidity.

## How Hog Cholera is Spread

*The spread of the disease* occurs whenever the germs from a diseased hog gain access to the healthy one, and this takes place in many different ways. Actual contact of the healthy and diseased hogs is a sure way to spread the disease, but it can be conveyed in many other ways.

The diseased hog gives off the germs of the disease in his urine and manure, and thus distributes infectious matter throughout his pen, pasture, or the railway car in which he is going to market. Healthy hogs placed in such premises after the diseased ones have been removed will contract the disease.

Another way infection is carried is upon the feet of men or animals, including birds. Curious neighbours, wishing to see what hog cholera looks like, may easily take the infection home to their own hogs on their boots or clothing. Wandering dogs may also act as carriers, and the common domestic pigeons may feed in an infected pen, and fly to some neighbouring farm carrying the infection on their feet.

Infection may also be carried from farm to farm in the water of a stream flowing through an infected pasture or pig-pen.

## Garbage Feeding

Another mode of infection has recently come to light and is responsible for many outbreaks of the disease in Canada. This takes place through the feeding of uncooked garbage and swill containing scraps of pork, bacon rind, etc., in the raw state. The explanation of this lies in the fact that in the United States many hogs are sent to the slaughter-house when in the early stages of hog cholera, and are killed, turned into pork and consumed for food without hindrance. This is possible because there is a lapse of some days between the time when the hog becomes infected and the time when he shows symptoms of it. This is known as the period of incubation, and hogs killed during this period

may, and often do, show no symptoms to the meat inspector that anything is wrong.

The meat from such hogs contains the germs of the disease, and such processes as salting, spicing, or smoking, do not destroy these germs. Cooking does destroy them, and as a quantity of United States pork is consumed in this country owners are cautioned not to feed kitchen refuse to hogs unless it has first been cooked.

Most of the outbreaks of hog cholera occurring in Canada in recent years could be traced to feeding uncooked garbage. This led to special regulations being made which prohibit the feeding of swine upon garbage or swill, raw or cooked, obtained elsewhere than on the premises where fed unless a license has been obtained from the Veterinary Director General. (See section 88 $\frac{3}{4}$ , page 14.) This license is only issued after the owner has signed an agreement to boil all garbage and to prevent his swine having access to uncooked garbage, to maintain his swine in a clean sanitary condition and to sell no hogs except for immediate slaughter. Owners having up to twelve hogs may use an open cooker, but for numbers exceeding twelve a steam cooker is required.

There is a great difference in the severity of the disease in various outbreaks. Sometimes it is of a severe or virulent type and rapidly fatal. In other outbreaks the type is mild and recovery frequent. The latter type may be considered just as dangerous to the community as the former, as it is more difficult to detect, and the recovered hogs are apt to spread the disease far and wide before it is recognized.

The duration of the disease is uncertain. A hog may die in a very few days, or may live for some weeks. Death does not always follow an attack of the disease, and a small number of hogs would survive an outbreak of the disease if it were thought wise to permit them to do so. Such hogs, however, are carriers of the disease. The germs exist in their blood, although producing no active effect. The hog is immune, but can give the disease to other hogs that are not immune. For this reason it is bad policy to attempt to cure the disease. The more recoveries you get, the more chances of getting fresh outbreaks of the disease as soon as new hogs are brought into the neighbourhood. It is far better to stamp out the disease by killing all the diseased hogs and disinfecting the premises.

### Symptoms

The early symptoms are not characteristic of the disease and may not enable a definite opinion to be formed. The hog loses his appetite, partly or altogether, is sluggish, disinclined to move, and if compelled to do so may cough. These symptoms occurring among hogs in the vicinity of an outbreak of hog cholera should be viewed with suspicion and the nearest veterinary inspector should be notified at once.

The sick hogs soon become thin and weak, walking with a staggering gait, especially with the hind legs, but hogs may die in a few days, before they have had time to lose much flesh.

The skin frequently becomes red in patches, the colour turning deeper and more purple as the disease advances. These patches usually occur inside the legs, under the body, or behind the ears, but may be seen anywhere.

The eyes discharge mucous secretion and the lids may be gummed together by it.

The bowels are generally loose, and a profuse diarrhoea may occur, although in some cases there may be constipation.

The sick hog generally goes off by himself, and is found lying in a quiet corner of his pen. If compelled to get up, he does so unwillingly, stands with his back arched and his belly drawn up, or moves in a weak, staggering manner and may fall over.

A sick hog seldom shows all of the symptoms described above, and in many cases it requires an expert to decide what is the matter. Usually one or two of the symptoms are well marked, such as coughing and rapid breathing, or diarrhoea and tucked-up appearance, or redness of the skin and discharge from the eyes.

The symptoms have been described at some length, so that the farmer may be on his guard if any of them are noticed, and call in the inspector before the infection has time to spread.

### **Examination After Death**

*Examining a hog after death from hog cholera.*—It is often necessary to examine a dead hog to make sure of the nature of the disease, and the following appearances may be looked for: reddening of the skin; bloody red spots on the surface of any of the internal organs, such as lungs, heart, bowels and stomach; a peculiar speckled appearance of the kidneys when the outer covering is stripped off, something like a turkey's egg; ulceration of the inner lining of the large bowel, especially near its junction with the small intestine; redness of the lymph glands; enlargement of the spleen; inflammation of the lungs (pneumonia). The examination should be made by an expert if possible, as some of these conditions may be caused by a secondary infection.

### **What Should Be Done When Hog Cholera is Suspected**

Notify the nearest veterinary inspector, or the Veterinary Director General, Ottawa, without delay. The owner or person in charge is bound by law to do this, and, if he fails to do so, may lose his compensation for any animals slaughtered under the Act, besides being liable to a heavy fine for his neglect.

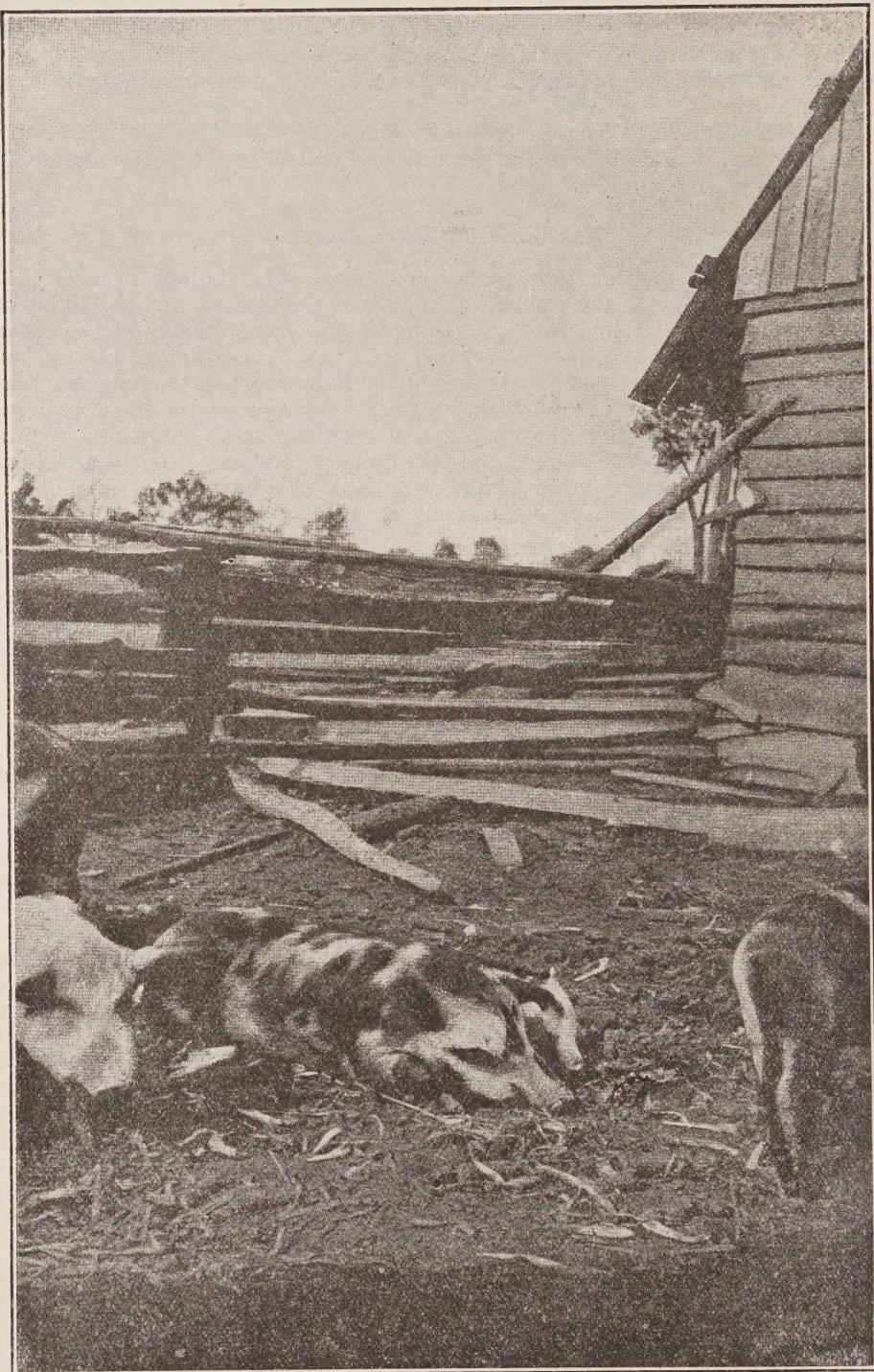
### **How the Disease is Dealt With in Canada**

The veterinary inspector, upon making sure of the existence of hog cholera, will have all the hogs on the premises slaughtered immediately. Those actually diseased are then destroyed by burning them up completely, or else deeply burying them in the ground. Hogs which were not sick but had been in contact with the diseased ones, and are in fit condition for food, may be dressed under the supervision of the inspector. If a careful examination shows them to be healthy they are allowed to be sold as dressed pork. The inspector assesses the value of the hogs destroyed, and if the owner has not been guilty of any neglect or infraction of the law, and carries out the instructions of the inspector regarding the disinfection of the place, he will receive compensation for his losses up to two-thirds of the assessed value.

The premises occupied by the diseased hogs are placed in quarantine until thoroughly cleaned and disinfected to the satisfaction of the inspector, and no fresh hogs are allowed on the premises for a period of at least three months afterward. The inspector then revisits the premises to make sure that the regulations have been complied with, and, if satisfied that such is the case, will recommend to the Minister of Agriculture the release of the premises from quarantine. The Minister is the only person authorized to grant this release, and he grants it on the recommendation of the inspector.

In special cases where neighbouring hogs are in close proximity to the infected premises and the swine appear healthy the Inspector may inject them with Anti-Hog Cholera serum. This serum will not cure Hog Cholera but if the swine are not already infected it may enable them to resist the disease for a short period of time.

Anti-Hog Cholera serum may only be used by an Inspector acting under the special instructions of the Veterinary Director General.



HOG CHOLERA—CHARACTERISTIC ATTITUDES.

## Cleansing and Disinfection

The following are the OFFICIAL RULES for the cleansing and disinfecting of premises after outbreaks of hog cholera:—

After infected hogs have been slaughtered the carcases should either be completely burned or buried at a depth of at least eight feet; if buried they should be covered to a depth of several inches with quick lime.

In most cases it will be found safest and most profitable to remove and burn the floors, partitions and lining of pens previously occupied by infected hogs, as also any rails, loose boards or other lumber to which such hogs had access.

Pens, other buildings and fences with which affected hogs have been in contact, are, when possible, to be thoroughly gone over with hot steam or boiling water before being coated with fresh lime wash, each gallon of which should contain a pound of carbolic acid, creolin or other germicide of equal strength.

The surface soil of pens and yards should be removed to a depth of at least six inches and well mixed with fresh lime, which should also be freely applied to the surface of the newly exposed soil. Ground so treated should receive over the lime a fresh coating of earth or gravel. Fields, orchards and gardens to which the diseased hogs have had access are to be ploughed as soon as possible.

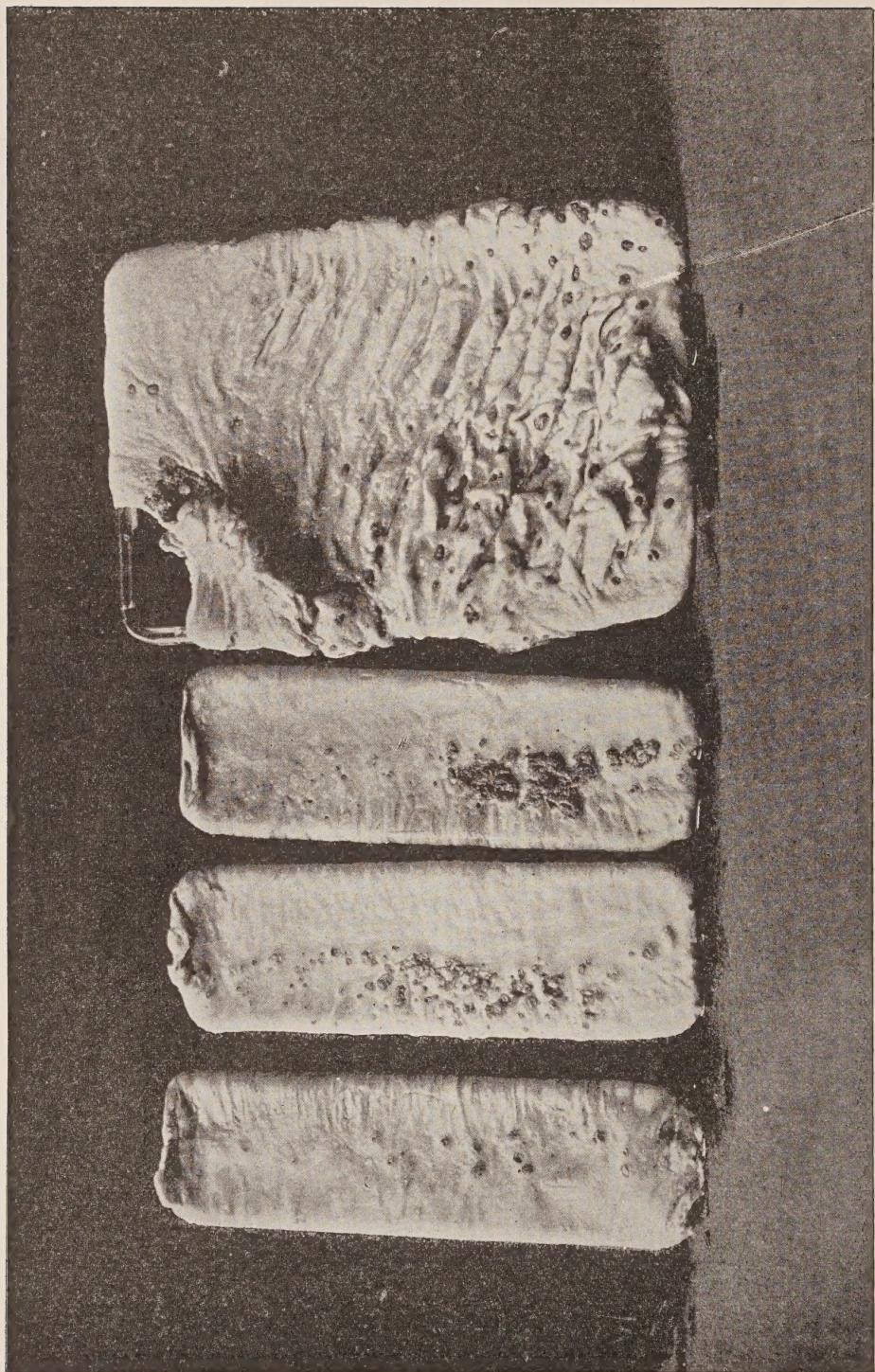
Every precaution should be taken to prevent the conveyance of infection from one place to another by means of the clothing or shoes of persons who have been attending to or otherwise dealing with diseased hogs.

Visitors should be discouraged during outbreaks of disease or until cleansing and disinfecting operations as above indicated have been completed.

Animals, especially dogs, are frequently the means of conveying the disease and should, wherever possible, be prevented from entering infected premises.

When, owing to severe weather or other unavoidable cause, it is found impossible to cleanse and disinfect immediately pens or yards formerly occupied by diseased hogs, such pens or yards should be closed up in such a manner as to prevent persons or animals obtaining access thereto until such cleansing and disinfection can be properly carried out.

Owners of diseased hogs should bear in mind that inspectors cannot recommend the release from quarantine of any premises, the disinfection of which has not been carried out in a satisfactory manner.



HOG CHOLERA. (ULCERS OF THE INTESTINE OFTEN ASSOCIATED WITH HOG CHOLERA. THE NARROWER PORTIONS ARE SMALL INTESTINES NEAR THEIR JUNCTION WITH THE LARGE BOWEL. THE LARGE PORTION INCLUDES THE VALVE AND A PORTION OF THE LARGE INTESTINE.)



KIDNEY AS OCCASIONALLY SEEN IN HOG CHOLERA.

## DOMINION OF CANADA

**REGULATIONS RELATING TO HOG CHOLERA AND SWINE PLAGUE**

BY ORDER IN COUNCIL DATED 8TH JUNE, 1911, IN VIRTUE OF "THE ANIMAL CONTAGIOUS DISEASES ACT, R.S.C., 1906."

1. No hog which is or has been affected with, or which has been exposed to hog cholera or swine plague, shall be permitted to run at large, or to come in contact with any hog which is not so affected.

2. Any inspector may declare to be an infected place, within the meaning of the Animal Contagious Diseases Act, any place or premises where the infection of hog cholera or swine plague is known or suspected to exist.

3. No hog or other animal, nor any portion or product thereof, shall be removed out of a place so declared to be an infected place, without a license signed by an Inspector.

4. Inspectors are hereby authorized to inspect any hogs affected with hog cholera or swine plague, or suspected of being so affected, or which have been in contact with animals so affected or suspected of being so affected, or which have been in any way whatsoever exposed to the contagion of hog cholera or swine plague, and for the purpose of making such inspection may order any such animals to be collected, detained or isolated.

5. The expenses of, and incidental to the collection, isolation, seizure, or otherwise dealing with animals for the purpose of these Regulations shall be borne by the owners of the animals, and no indemnity shall be allowed to the owner in case of damage arising out of or resulting from such actions, except as hereinafter provided.

6. Hogs affected with hog cholera or swine plague, or which have been in contact with or in close proximity to hogs affected with hog cholera or swine plague, shall on an order signed by an Inspector duly appointed under the Animal Contagious Diseases Act be forthwith slaughtered and the carcasses disposed of as in such order prescribed, compensation to be paid to the owners of such animals if and when the Act so provides.

7. After any place or premises has been declared to be an infected place on account of the existence or suspected existence thereon of hog cholera or swine plague, no hogs shall be brought on to such place or premises, except with the authority of an Inspector, until the said place or premises shall have been declared to have been free from infectious or contagious disease, as provided in Section 20 of the Animal Contagious Diseases Act, and in case of the infraction of this Regulation any compensation to which the owner might otherwise be entitled shall be withheld.

**8. Compensation may be withheld in the case of hogs fed on uncooked garbage or kitchen refuse, or on any raw animal flesh or similar food likely to convey the infection of hog cholera or swine plague.**

9. Before an order is made for the payment of compensation in any of the cases aforesaid there must be produced to the Minister of Agriculture a satisfactory report, order for slaughter, certificate of valuation and slaughter, and certificate of cleansing and disinfection, all signed by an Inspector.



HOG CHOLERA. (LESIONS BELOW THE ILEO-CECAL VALVE, OFTEN ASSOCIATED WITH HOG CHOLERA.

10. Every yard, stable, hog pen, or other place or premises, and every wagon, cart, carriage, car or other vehicle, and every utensil or other thing infected or suspected of being infected with hog cholera or swine plague shall be thoroughly cleansed and disinfected by and at the expense of the owner or occupier in a manner satisfactory to an Inspector.

GEORGE HILTON,  
*Veterinary Director General.*

HEALTH OF ANIMALS BRANCH,  
DEPARTMENT OF AGRICULTURE,  
OTTAWA.

**Attention is Specially Directed to the Following Sections of "The Animal Contagious Diseases Act, R.S.C., 1906."**

**Section 3.**—Every owner of animals and every breeder of or dealer in animals, and every one bringing animals into Canada, shall, on perceiving the appearance of infectious or contagious disease among the animals owned by him or under his special care, give immediate notice to the Minister and to the nearest Veterinary Inspector of the Department of Agriculture, of the facts discovered by him as aforesaid.

2. Any Veterinary Surgeon practising in Canada shall immediately on ascertaining that an animal is labouring under an infectious or contagious disease, give similar notice to the Minister and the nearest Veterinary Inspector.

**Section 4.**—Every owner of such diseased animals who neglects to comply with the provisions of the last preceding section shall forfeit his claim to compensation for any animals slaughtered in accordance with the provisions of this Act, and no such compensation shall be granted to him.

**Section 23.**—Whenever under this Act a place has been constituted an infected place, no live animal, nor the flesh, head, hide, skin, hair, wool or offal of any animal or any part thereof, nor the carcass or any remains of any animal, nor any dung of animals, nor any hay, straw, litter or other thing commonly used for and about animals, shall be removed out of the infected place, without a license signed by an Inspector appointed as aforesaid until said place has been released by order of the Minister.

**Section 35.**—Every person who neglects to give notice, as required by this Act, of any facts discovered or perceived by him indicating the appearance or existence of infectious or contagious disease among animals owned by him or under his special care, or who conceals the existence of infectious or contagious disease among animals, shall incur a penalty not exceeding two hundred dollars.

**Section 36.**—Every person who turns out, keeps or grazes any animal knowing it to be infected with or labouring under any infectious or contagious disease, or to have been exposed to infection or contagion, in or upon any forest, wood, moor, beach, marsh, common, waste-land, open field, roadside or other undivided or unclosed land, shall, for every such offence, incur a penalty not exceeding two hundred dollars.

**Section 37.**—Every person who brings, or attempts to bring into any market, fair or other place, any animal known by him to be infected with or labouring under any infectious or contagious disease, shall, for every such offence, incur a penalty not exceeding two hundred dollars.



DISINFECTION OF PREMISES. NOTE PLOUGHED GROUND, WHITEWASHED TREES AND FENCES.

**Section 38.**—Every person who sells or disposes of or puts off, or offers or exposes for sale, or attempts to dispose of or put off any animal infected with or labouring under any infectious or contagious disease, or the meat, skin, hide, horns, hoofs or other parts of an animal infected with or labouring under any infectious or contagious disease at the time of its death, whether such person is the owner of the animal, or of such meat, skin, hide, horns, hoofs or other parts of such an animal, or not, shall, for every such offence incur a penalty not exceeding two hundred dollars.

**Section 41.**—Every person who refuses to admit or who obstructs or impedes an Inspector or other officer acting in execution of this Act, or of any order of or regulation made by the Governor in Council or the Minister thereunder, and every person who aids and assists him therein, shall, for every such offence, incur a penalty not exceeding one hundred dollars; and the Inspector or other officer may apprehend the offender and take him forthwith before a justice of the peace to be dealt with according to law; but no person so apprehended shall be detained in custody, without the order of a justice, longer than twenty-four hours.

**Section 46.**—Every person who violates any provision of this Act, or of any regulation made by the Governor in Council or by the Minister, under the authority of this Act, in respect to which no penalty is hereinbefore provided, shall, for every such offence, incur a penalty not exceeding five hundred dollars and not less than fifty dollars.

*Extracts from Regulations Authorized by Order in Council*

**Section 88 $\frac{1}{2}$ .**—The importation, manufacture, sale or use of hog cholera serum or virus, except by an inspector acting under the special authority of the Veterinary Director General, is prohibited.

**Section 88 $\frac{3}{4}$ .**—The feeding of swine upon garbage or swill, either raw or cooked, obtained elsewhere than on the premises where fed, is prohibited, unless special permission in writing is first obtained from the Veterinary Director General.



OTTAWA  
F. A. ACLAND  
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY  
1925